The I/O Connector

July 1988

The Newsletter of the San Diego Atari Computer Enthusiasts

TREASURER WANTED!

Yes, S.D.A.C.E. needs a new treasurer. Duties include receiving membership dues and advertising receipts, and disbursing checks for printing and postage costs. Benefits include free disks of the month and a **free** small pizza at dinner board meetings which the newsletter editor will pay for.

CONTACT AN OFFICER FOR FURTHER DETAILS!

THE SAN DIEGO ATARI COMPUTER ENTHUSIASTS

(S.D.A.C.E.) is an independent, non-profit organization and user group with no connection to Atari Corporation. Membership includes access to the the program library, subscription to the **I/O Connector**, and access to other club activities. Permission to reprint articles from this newsletter in non-commercial form is permitted without specific authorization as long as original credit is granted.

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Membership	Dick Hiatt	541-7034	(5 PM-9 PM)
ST Library	Paul Huntington		
Newsletter	Tom Briant	224-8975	(5 PM-9 PM)

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SUBMISSIONS TO THE NEWSLETTER

The editor welcomes all submissions. They must arrive by the 2nd Tuesday of the month to be printed in the next month's newsletter. Mail printed copy or 3.5" ST format disks with return postage to the club P.O. Box, or upload to the S.D.A.C.E. bulletin board by the 2d Monday of the month. Text must be in ST-Writer, 1ST WORD, WORD WRITER, WORD PERFECT, or ASCII format. Graphics must be hard-copy for the time being...

The Pursuit of Happiness by Tom Briant

S.D.A.C.E. needs a new Treasurer! Rick Dehaven has done the Treasurer's job for the past month and wants to turn it over to someone else now! So contact one of the officers listed on the inside front cover today to state your qualifications. You will need to be a C.P.A. (Consistently Prompt Attendee) at the Board meetings, but you don't need to know any more about taxes and accounting than how to fill out a 1040EZ and balance your checkbook.

While on the subject of new officers, Ron Miller, our 8-bit V.P., will return to school this fall. If you want to to serve as 8-bit V.P., your time has come!. Call Ron at 748-7195.

Since attendance at the 8-bit meetings in Mira Mesa has fallen, perhaps it is time to integrate the 8-bit meetings with the ST workshop on the first Thursday of every month. Any comments?

Now to this issue's articles. Please read the letters about the NITE LITE BBS system. Bad enough this system is vaporware, but the supposed manufacturer took $70.00 of a member's hard-earned money! Other newsletters may feel free to reprint these letters, if only to save their members the aggravation experienced here in San Diego.

While damning those who don't deliver on their promises, you should praise those who do. Chor-ming Lung, the author of SHEET, the shareware spreadsheet, promised a desk accessory version of SHEET to those who donated $10.00. I sent my $10.00 in, and he delivered. It took a while, but he had to chase down a bug. SHEET.ACC works fine, even with WordPerfect. So send Chor-ming Lung those shareware payments and get a great Desk Accessory.

COMPUTALK TCS wants more business from San Diego, so they sent us the brochure/applicaton which I have reproduced. They also sent some free time which I gave to Paul Huntington, our ST disk librarian. You can read the results of Paul's time on COMPUTALK by downloading COMPTALK.ARC from SIG 1 on the club BBS and from the ST area on Computer Plus' BBS.

The remainder of this month's articles cover desktop publishing in one form or another. Douglas N. Wheeler's GDOS tutorial should answer your questions about this part of the ST's operating system. The Hewlett-Packard Deskjet is the printer for the rest of us; who would love access to a laser printer, but don't want to put up with their memory requirements, maintenance costs, or power requirements. A hard disk becomes desirable when you do desktop publishing (swapping disks soon becomes a major pain) so here's how to modify your ST for easier hard disk usage. You 8-bit users should consider looking into Daisy Dot II for your desktop publishing. I've seen Newsroom's output and I'm not satisfied at all.

Now from the mailbox comes a few things. Mars Merchandising of Elmhurst, Illinois has brought out a cable enabling you to switch between Drive #2 and a Drive #3, such as a 5.25" drive used with pc-ditto. If 3 or more members order this cable, the costs drops to $28.95 per cable. For more information, call Mark Lacine at 1-312-530-0988.

If you do Biblical research, you might want to consider Christian Software Developing's New Testament. They offer a great introductory deal: send them 2 disks and $2.00 for postage & handling and receive the program disk and 1 data disk.. If you like what you get, send six more blank disks and receive the New Testament.. The Old Testament is in the works. If you can't wait, Brad Roltgen Enterprises has the Old Testament on Disks 401-412 for $34.95, the New Testament. on Disks 413-416 for $12.95, and the entire Bible for $39.95.

The latest ST-Informer reviews a very interesting word processor, the ML_Write/Multi-Lingual Word Processor. They have a demo disk available as a P/D disk which will print out in ten different fonts, including Russian, Greek, Hebrew, and Arabic. It just won't save, that's all. If you know where the program's author, Drew Haniger, lives; tell ST Informer.. they lost track of his address. If you order this disk, you might want to order REVOLVER, too. This is the new "switcher" program from Strange Systems, which can save a program in progress to disk.. That description hardly does justice to this program's promise and I hope to have more information next month. Hopefully Publishing Partner Professional will show up, too; as well as Calamus, the German DTP program, in its Mega and 1040 versions.

Atari BBS List

SDACE-BBS	XE/ST	284-3821
COMPUTER PLUS	XE/ST	691-7862
COMPUTER OUTLET	ST	282-6815
COMPUTER BLVD ST		670-1095 (NEW!)
ST-MIDI CONNECTION	ST	452-7535
SMART 520 ST	ST	480-9686
SMART 520 ST	ST	726-4419
THE LORD'S HOUSE	XE	579-7354
THE LOONEY BIN	ST	390-9470
SHERWOOD FOREST	XE	273-5603

Updates and additions welcome!

3/29/88

Dear Editor,

I am a regular reader of ANALOG COMPUTING. It is a fine magazine, but I felt that I should contact your company for a problem I have. It is not with your magazine, but with that of another company whose product your company had reviewed.

In the APRIL, 1987 issue of ANALOG on page 53 Mr. Charles Bachand reviewed Paul Swansons NITE LITE BBS program. He gave it high praise saying many good things about the program. I thought about starting a bulletin board system with my 130XE for about 6 months after that. I decided to buy the program based on the information in the review.

I sent Mr. Swanson a check for $70.00 and a note telling him that I wanted the program. I told him that I was buying somewhat blindly because I was buying his product according to the article in ANALOG and did not know anyone who had the program. I asked him to send me back my check if the program did not suit the needs I specified in the letter. This was October 20, 1987.

The check was cashed, according to my credit union statement, on November 2, 1987. I had not yet received the program. I contacted his BBS and he said that he had sent it. This happened a number of times. I contacted his BBS in December (a week before Christmas) and told him that I had not yet received it. He said that he sent it and blamed the Post Office. I asked him to send it by U.P.S. and he said that he would the week of Christmas. I said that I would wait a couple of weeks. It did not come. I contacted U.P.S. and they said that it should have not taken any longer than six working days.

I tried to contact him by leaving messeges on his BBS, but never received a reply. On January 8, 1988 I sent him a letter canceling my order explaining why and said I would allow two weeks for my refund. I never received it, nor any reply.

I filed a fraud complaint with the Post Office explaning the situation in detail. Since then I have met a gentleman here in San Diego who had also had trouble getting the program from Paul Swanson. He said that he really had to push him (Paul Swanson) to get the program.

Since then I have sold my system and I have been waiting for a reply from the Post Office. I realize that your company has no control over this situation, but I am sure you know that mail fraud is a very serious federal offense. I don't know how you received your copy of the program for the review, but I'm sure that you did not have any trouble getting it. I feel that whenever a company reviews a product they should do it for a reputable

business person since much of the public is going on the reviewers word. My dealing with Mr. Swanson has made me leary of dealing with any other advertisers in your magazine. I belong to the San Diego Atari Computer Enthusiasts Users Group (SDACE), am active on many bulletin boards, and have expressed my concern with others. I owe my fellow readers and users that much. I never received my $70.00 and possibly never will and I am sure that I am not the only one. If you can help me in any way please respond. I look forward to your reply.

Thank you.

Jessie Herrera

May 6, 1988

Dear Jessie,

I have forwarded your letter of complaint to Mr. Swanson, with the instructions that he is to satisfy your account or we'll be forced to print your letter in the magazine as a warning to other readers.

I hope this gets you some action. If it doesn't, I will inform the publisher that we should no longer accept advertising from Mr. Swanson.

Thank you for notifiying us of your problem, and if you don't hear from Mr. Swanson in a reasonable amount of time, please let us know so that we may persue the matter further.

Sincerely,

Clayton Walnum

Clayton Walnum
Executive Editor

6/22/88

Dear Mr. Tom Briant,

I am sending you a duplicate of the letter I sent to Analog Computing. This letter was in reference to the problem I have with Paul Swanson of NITE LITE SYSTEMS. I you remember from a conversation we had a while ago I was supposed to send you this letter. I'm sorry I didn't earlier, but I couln't find the disk it was on. Well, I finally found it and would appreciate it if you would print it, minus my address if you would, in the Atari newsletter. This is an exact duplicate of the letter I sent ANALOG.

I am also going to u/l a copy of it to compuserve as I am on there now. I filed a complaint with the Post Office and recieved a reply from them stating to respond in writing if I didn't recieve any action from Paul Swanson. I didn't recieve any so here I go again. I am also sending another letter to Analog (they sent me a positive reply to my letter. Enclosed is a copy if you would like to print it also.).

6/22/88

Dear Mr. Clayton Walnum,

I am responding to the reply you sent me in reference to my problem with Paul Swanson of NITE LITE SYSTEMS. Well, I gave him plenty of time to respond and he didn't. Please print the letter I sent you in your magazine. Enclosed is another copy of the original and of your reply to my first letter.

I am refiling my complaint against Paul Swanson with the Post Master General and I am also going to distribute the letters in reference to the problem (all) to compuserve and any bulliten board systems I can. I am also sending a copy of these letters to San Diego Atari Computers Enthusiasts group (S.D.A.C.E.) here in San diego so that they can print them. I can't let him do that to others (FRAUD). I hope you understand my concern.

Thank you,

Jessie Herrera

EVERYTHING YOU EVER WANTED TO KNOW ABOUT GDOS (AND MORE)

by Douglas N. Wheeler

What is GDOS?

GDOS is an extension to GEM which adds new capabilities to your ST. Originally, GDOS was intended to be an integral part of GEM, but due to time restraints, had to be left out. Atari is now offering GDOS to registered developers at a cost of $500 per application using GDOS (it doesn't cost anything to look, except for the cost of becoming a developer).

The three primary new capabilities are:

1. The ability to use multiple fonts in various point sizes on the screen, printer, and other output devices.

2. Allows the creation of metafiles, which are standardized files intended to be useable by many different applications. This allows files created in one file to be useable in another.

3. Support for various output devices with resolutions up to 32,767 x 32,767 (including emulation of this resolution on the screen). This allows graphics to be printed at the highest resolution of the output device.

How to use GDOS

In theory, using GDOS is as simple as putting GDOS.PRG in your AUTO folder and booting the computer. In practice, though, a series of conditions must be met. The most important of these conditions is that there must be a valid ASSIGN.SYS file present in the root directory of the boot disk.

The following is a typical ASSIGN.SYS file.

```
PATH=C:\GDOS.SYS
;
01p SCREEN.SYS  ; default screen
;
02p SCREEN.SYS  ; low resolution
ATSS10.FNT      ; fonts
ATSS12.FNT
ATSS18.FNT
ATSS24.FNT
ATTP10.FNT
ATTR10.FNT
ATTR12.FNT
ATTR18.FNT
ATTR24.FNT
;
03p SCREEN.SYS  ; medium resolution
ATSS10CG.FNT
ATSS12CG.FNT
ATSS18CG.FNT
ATSS24CG.FNT
ATTP10CG.FNT
ATTR10CG.FNT
ATTR12CG.FNT
ATTR18CG.FNT
ATTR24CG.FNT
;
04p SCREEN.SYS  ; high resolution
ATSS10.FNT
ATSS12.FNT
ATSS18.FNT
ATSS24.FNT
ATTP10.FNT
ATTR10.FNT
ATTR12.FNT
ATTR18.FNT
ATTR24.FNT
;
21 FX80.SYS  ; Epson 9-pin dot-matrix printer
ATSS10EP.FNT
ATSS12EP.FNT
ATSS18EP.FNT
ATSS24EP.FNT
ATTP10EP.FNT
ATTR10EP.FNT
ATTR12EP.FNT
ATTR18EP.FNT
ATTR24EP.FNT
;
31r META.SYS  ; metafile driver
ATSS10MF.FNT
ATSS12MF.FNT
ATSS18MF.FNT
ATSS24MF.FNT
ATTP10MF.FNT
ATTR10MF.FNT
ATTR12MF.FNT
ATTR18MF.FNT
ATTR24MF.FNT
```

As you can see, I have divided the file into distinct groups. The first line of the ASSIGN.SYS file is use to tell GDOS where the fonts and device drivers are located. This line must always start with PATH= which is followed by a pathname of up to 64 characters locating the fonts and drivers,

Following the path identifying line is the list of device drivers and their associated fonts. Each group is composed of four parts. First is a number representing the type of device:

01-10 Screen drivers
11-20 Plotter drivers
21-30 Printer drivers
31-40 Metafile drivers

The Atari has four built-in device drivers, they are

01 Default screen (used when an application doesn't care about the screen resolution)
02 Low resolution screen
03 Medium resolution screen
04 High resolution screen

Immediately following the device number may be a "load flag" of either "p" or "r". A "p" indicates that the device driver is

"p"ermanent and does not need to be loaded by GDOS. Because the ST has it's screen drivers built into ROM, there will be a "p" after devices 01-04. An "r" indicates that the device driver should be kept "r"esident, causing GDOS to load the device driver immediately. If a load flag is not present, GDOS will only load the device driver when an application opens (accesses) that device.

After the device number and load flag is the filename of the device driver as it appears in the disk directory. In the case of ROM-resident drivers, the filename is only a place-holder (but must be present). Keep in mind that the device driver must be in the folder specified in the path line. On the lines following those three items is a list of fonts associated with that device (again, these are the filenames as they appear in the indicated path of the disk).

You may have noticed a few lines with semicolons (;) in them. GDOS will treat any text on a line to the right of a semicolon as a comment and will ignore it.

Editing/Creating ASSIGN.SYS

Now, why would you want to change your ASSIGN.SYS file? Well, if you have just one program which uses GDOS, and you are happy with the fonts you have, then there is no reason to change it. But, now that GDOS is beginning to be accepted on the ST, many of us are acquiring a collection of GDOS applications and fonts. By editing or creating a new ASSIGN.SYS, you could create a "universal" ASSIGN.SYS and font/driver folder to be used with all of these programs!

Luckily, the ASSIGN.SYS file is a standard text (ASCII) file which may be edited with most text editors and word processors. The only requirement is that the file not contain any formatting codes. This can usually be accomplished in a word processor by turning document mode off, or selecting "Save as text" (check your word processor manual for exact instructions for doing this). If you are using a text editor, such as MicroEmacs or Tempus, all you have to do is save the file.

Starting at the top, the first thing you may want to change is the PATH= line at the beginning of the ASSIGN.SYS file. By changing this line, you can put your fonts and printer drivers on another disk or hard drive partition (instead of your boot disk). If you are using floppies, keep in mind that this directory (folder) must be present when an application accesses any of the GDOS devices. Also, to speed booting, this directory should be present when GDOS is loaded.

Below is a list of my recommended configurations based on what arrangement of disk drives is being used.

One floppy drive:
- Boot disk (drive A) with:
  - AUTO folder containing GDOS.PRG
  - GDOS.SYS folder containing the fonts and drivers
  - ASSIGN.SYS with PATH=A:\GDOS.SYS
  - Any GDOS application(s) (you may wish to create separate boot disks for each GDOS application)

Two floppy drives:
- Boot disk (drive A) with:
  - AUTO folder containing GDOS.PRG
  - ASSIGN.SYS with PATH=B:\GDOS.SYS
- Font/driver disk (drive B) with:
  - GDOS.SYS folder containing fonts and drivers
- Application disk (drive A after booting GDOS) with:
  - Any GDOS application(s) (you may wish to create separate application disks for each GDOS application)

Hard drive (booting from floppy):
- Boot disk (drive A) with:
  - AUTO folder containing hard drive boot program and GDOS.PRG
  - ASSIGN.SYS with PATH=C:\GDOS.SYS
- Hard drive partition C with:
  - GDOS.SYS folder containing fonts and drivers
- Any hard drive partition with:
  - Any GDOS application(s) (may be on any partition)

Hard drive (autobooting):
- Hard drive partition C with:
  - AUTO folder containing GDOS.PRG
  - GDOS.SYS folder containing fonts and drivers
  - ASSIGN.SYS with PATH=C:\GDOS.SYS
- Any hard drive partition with:
  - Any GDOS application(s) (may be on any partition)

Of course, these are only suggestions, and other configurations may be better for different applications. Hopefully you should now be able to create other set-ups without too much difficulty. There are a few "musts" that have to be observed:

GDOS.PRG must be in the AUTO folder of the boot disk.

ASSIGN.SYS must be in the root directory of the boot disk.

The PATH= line in the ASSIGN.SYS file must contain the complete pathname of the folder containing the fonts and drivers.

The fonts and drivers must be in the right place when an application or tries to open a device.

A bit about fonts

One question about GDOS fonts that people ask is, "when are the fonts loaded?" Many people are under the impression that all the fonts are loaded when GDOS is initially loaded. This is not true (and cannot be done). An "r" load flag in the ASSIGN.SYS file will cause GDOS to load only the device driver, not the fonts. Fonts are loaded only after an application opens a device and asks for the fonts to be loaded. At that time, GDOS will attempt to load all the fonts for that device. If there is an error (can't find the file, not enough memory, etc.) GDOS will skip over that font and continue with the next one. When an application is through with the fonts, it can "unload" the fonts to free up that memory.

Another fact that many people don't understand is that the font filename is irrelevant to GDOS. Each font has a "header" consisting of various parameters, some of these are: point size, font name, and a font ID which is used to identify fonts of the same type (i.e. all swiss fonts have the same ID). Another thing to note is that GDOS does not handle line spacing, this is handled by the application regardless of the actual size of a given font. Some programs use the point size to determine line spacing, and others use the actual height of the font (yes, the point size can be set different from the actual size).

For those of you creating your own fonts (with GEMFED or FONTZ!), you must assign a unique font ID (from 0 to 32,767) to each of your fonts, and all font of the same type (i.e. Times), but of different size, must have the same ID. Another thing you must know when creating your own fonts, is the resolution of the devices you are

creating the fonts for. The folowing is a list of most of the currently available devices and their resolution.

Low resolution screen	45 x 45 (horizontal dpi x vertical dpi)
Medium resolution screen	90 x 45
High resolution screen	90 x 90
9-pin dot-matrix printer	120 x 144
24-pin printer	180 x 180 or 360 x 360 (NEC P-series only)
Laser printer	150 x 150 (some) or 300 x 300

As you can see, most of these devices have square (round) pixels. This allows for sideways printing using the same fonts as for vertical (normal) printing. A notable exception to this is with the 9-pin dot-matrix printers, which will distort characters when printing them sideways. Different drivers (from different companies) handle this problem differently: they either ignore the fact (and print distorted characters sideways), or they print the left and right sides of a horizontal page on two separate vertical pages, which must then be taped together. The first method is the easier (and faster) of the two, but the second method will produce correct characters, and the taping isn't too bad if you are going to photocopy the final product.

It would be possible to create separate fonts for sideways printing. but so far this has not been done. Also, Epson printers (and 100% compatibles) have a 144 x 144 dpi (double plotter) mode which could be utilized. This would not only allow non-distorted sideways printing, but offers slightly higher resolution in the horizontal axis.

Font filenames

As I stated earlier, font filenames are not used by GDOS, but to us humans, consistant filenames can greatly simplify things. With the official release of GDOS (late last year), Atari adopted a standardized way of naming font files. Here I will explain Atari's idea and add a few extensions

A font filename like ATSS10EP.FNT may look meaningless to someone who doesn't know how the filename was derived, but is, in fact, very functional.

The first and second characters (AT) indicates the creator/distributor of the font (in this case Atari). Atari has suggested that these characters be "AT" for all fonts used on the Atari, this seems meaningless to me, as I don't have any fonts for any other computers on my ST disks. (Why would I?) I feel these two characters can be put to better use to specify the creator/distributor.

The third and fourth characters (SS) identify the typestyle (in this case Sans Serif). These should be unique to a particular rendition of a specific typeface.

The fifth and sixth characters (10) specify the point size of the font. This should be the point size as printed on the device the font was designed for, not the pixel height. Also, sizes less than 10 should have a leading zero (i.e. 06) to maintain the overall structure.

The seventh and eighth characters (EP) specify the device for which the font was designed (in this case the Epson 9-pin driver). If there are no seventh and eighth characters, the font is assumed to be for the high-resolution screen.

The filename extender on all fonts will be .FNT.

Although not many companies/individuals have produced fonts for the ST (yet), I recommend that all font filenames follow this convention to avoid confusion. I also suggest a few standard identifiers:

Creator/distributor:
- AT - Atari
- MG - Migraph
- TW - Timeworks
- NC - Neocept

Typestyles:
- SS - Sans Serif (Atari's Swiss)
- TR - Times Roman (Atari's Dutch)
- TP - Typewriter (Atari)
- DB - Dingbats (Timeworks' Bullets)
- DL - Drury Lane (Timeworks)
- MA - Madison (Timeworks)
- RK - Rockface (Timeworks)
- RA - Ravinia (Timeworks)
- CL - Camelot (Neocept)

Device:
- MG (or none) - Monochrome graphics (high/low resolution screen)
- CG - Color graphics (medium resolution screen)
- EP - Epson 9-pin dot-matrix prnter (120 x 144)
- NB - Star NB-24 24-pin dot-matrix printer (180 x 180)
- NC - NEC C-series 24-pin dot-matrix printer (360 x 360)
- LL - low resolution laser printer (150 x 150)
- LS - standard laser printer (300 x 300)

In many cases, the creator/distributor is not important, in which case the first four characters can be used for the typestyle. You will also notice that I have listed typestyles from various companies, I have done this because I recommend that you rename all of the font you currently have to match the above conventions, this will save you a lot of confusion in the future when you may have ten times as many fonts. One thing to note if you create a master ASSIGN.SYS file, is that although the Timeworks Swiss and Dutch fonts are different from Atari's, they use the same font IDs. GDOS could get very confused if you have two fonts with the same ID and point size. My personal recommendation is to replace Timeworks' Swiss and Dutch fonts in the 10, 12, 18, and 24 point sizes with the ones from Atari, as I feel these are much more professional and true to the original Helvetica and Times Roman typefaces.

Metafiles

Metafiles are (in theory) ideal files which can be exchanged between different GDOS applications. Metafiles are those files with a .GEM extender. Metafiles are "ideal" in the respect that they are resolution independent. They are simply instructions for the computer to recreate a page on any output device at that device's highest resolution. This is accomplished by storing commands for drawing lines, circles, rectangles, text, etc., unlike most picture files (.NEO, PI?, etc.) whitch store the dots making up an image.

Unfortunately, metafiles are not 100% standard yet. This results in programs not being able to read metafiles created by another application. Technically, the fault lies with the program trying to load the metafile, not the creator. Many different parameters may be

present in the header of a metafile, but only a few of these are required. Unfortunately, many applications expect some of the optional parameters to be there and can't load the file correctly if they don't exist. Currently Easy-Draw (version 2.3) is the most capable of the available GDOS applications, and can read just about any metafile.

Some of the more recent GDOS applications are allowing the use of GEM image files (those ending in .IMG). These are bit-mapped images similar to those created by the various ST paint programs (but without the screen size and resolution limitations). As is the case with other paint files, these images may be jagged or blocky when printed on a high resolution device.

A very important fact about images in metafiles is that the metafile does not actually contain a copy of the image. The metafile only contains the filename of the image on disk. This means that you must not remove the disk containing an image while the metafile is being printed, and everytime you print that metafile, the image must be in the same disk (or you will have to change your file). If GDOS can't find the image, it will just skip over it. Be warned.

Miscellaneous comments

If you are using the Timeworks Desktop Publisher ST (TDTP), you must run the FONTWID.APP program each time you modify the ASSIGN.SYS file. Another important fact is that the relative widths of the Timeworks fonts are not the same for different devices. What this means is that if you create a document with TDTP installed for use with an Epson 9-pin printer, then load the file into TDTP installed for use with a laser printer, the text will be re-flowed. This may result in different column breaks, lost text, extra white space, etc. The best solution to this problem is to create the document with a TDTP installed for the device which will create the final copy. Another idea is to use Atari's fonts (if you have them, they are not public domain), as the relative sizes between devices is very close (there still may be a few differences, but can be fixed readily).

For those of you who have seen a lot of DEGAS Elite GDOS fonts floating around, don't get too excited. For those to print properly (even blocky), you must have matching printer fonts for the screen fonts. GEMFED or FONTZ! greatly simplify this process, but if you intend to create a complete set of fonts in four or five sizes, you will have a lot of work ahead of you.

Anyone creating fonts for the general public (either commercial or PD), try to remember that not everyone is using the same kind of monitor or printer you are. If at all possible, create fonts for all the devices I have listed above.

Another thing I didn't mention are metafile fonts. These are not really fonts, but merely width tables designed to keep correct character spacing in a file when used with different GDOS applications. In most cases, you can eliminate metefile fonts without any loss of quality.

Glossary

Device (Graphics Device) - Anything used to create some form of output, usually on a video screen or printed on paper or film.

Device Driver - A computer program used to control a device as specified by a "master" application.

Font - A typeface of a given style and point size.

GDOS - Graphics Device Operating System; an extension to the Atari ST's operating system allowing for the use of various fonts and graphics devices.

GEM - Graphics Environment Manager; the portion of the ST's operating system which is responsible for most of the visual aspects of the ST.

Header - A portion of a file (usually at the beginning) containing various parameters describing the file.

Line Spacing - The distance between successive line of text, usually measured in points.

Pixel - Picture element; a single dot, usually one of many used to create a complete image on a video screen or printed on paper or film.

Point - A typographical unit of measure; approximately 1/72".

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Any questions or comments about this document can be directed to me: Douglas N. Wheeler, PSC 3 Box 6096, Travis AFB, CA 94535 (707) 437-3786, GEnie address D.N.WHEELER.

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GENERAL INFORMATION

Computalk Telecommunications Service (TCS) is the only Atari* based bulletin board of its kind. We have successfully found a way to link 6 Atari computers together to form a network allowing multi-users to interact at the same time.

Computalk TCS is not expensive. There are no sign-up fees or online charges. Once you have paid your first payment of $25.00 for 6 months or $40.00 for 1 year, you will be able to enjoy all of the features that Computalk TCS has to offer.

Any computer can access Computalk TCS. To connect you should set your computer to 300, 1200 or 2400 baud, 8 bits, 1 stop bit, and no parity.

Computalk TCS is a local call. We are proud to annouce that you can now access Computalk TCS from any city in the nation that has a PC-Pursuit host computer.

Signing up to Computalk TCS is one of the easiest things to do. You have two methods of joining. You may sign-up online with your major credit card, or send the attached application in with your payment. Once your application is received it only takes about 3 working days to get your new ID# and password back to you.

*ATARI is the trademark of Atari Inc.

CURRENT FEATURES AVAILABLE

Computalk TCS gives you more for your money. Here are just a few of the current features available online:

- **Compu-Gab:** Allows you and 5 other users to talk publicly and privately. There are areas for private conferences. You also can whisper one or two lines to another user privately.
- **Compu-Trek:** A graphics, multi-user, online adventure, allowing you to build a ship and fight against other users. Lazers, missiles and mines are all at your fingertips to attack your enemy.
- **Downloads:** Computalk TCS currently has over 2,000 downloads for BOTH 8-Bit and ST Atari computers. We also support all forms of protocals for downloading.
- **Electronic Mail:** You are given your own private mail box alerting you to new and old mail currently in your mailbox. There is NO extra charge for this feature.
- **Computer features:** Computalk TCS keeps you up to date on current computer related news and user columns and features.
- **Hotline to Atari, Inc:** Computalk TCS links you directly to the Atari Corporation. Once a month Atari staff members call in, answer questions and report on new products about to hit the market.
- **Messages Bases:** Computalk TCS gives you 8 different message bases ranging from Buy & Sell to New Products Message Base.
- **Live D&D Game:** Computalk TCS now offers you a LIVE Dungeons and Dragons online adventure. This allows up to 6 players at one time.

ADDITIONAL SERVICES

- **Time credited for Uploads:** You are credited for any and all uploads you send to Computalk TCS. Credit is based on the type and length of the upload.
- **Automatic billing:** You may now choose to have your membership renewed automatically with your major credit card. Simply fill out the application enclosed and we will do the rest.

TRIAL VISIT ON COMPUTALK TCS

Computalk TCS now allows you to check us out before joining. To do so, all you need to do is:

1. Set your terminal program to 8 data bits, 1 stop bit, no parity, full duplex 300, 1200 or 2400 baud.

2. Next, call our metro number:
(817) 589-2588

3. After connection you will get the message "Welcome to Computalk TCS..."

4. At the main logon prompt type in NEW and you are now ready to begin your free 20 minute visit.

WANT MORE INFORMATION?

Call our 24-hour hotline, at:
(817) 595-0094. If our representatives are busy, you will be able to leave a brief message.

APPLICATION FOR MEMBERSHIP

Yes. Sign me up to become a member of Computalk TCS! Enclosed you will find my payment for membership (NOTE: Prices include sales tax.)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Type of Membership: _____ First Time (6 Months = $26.75 1 Year = $42.80)

_____ Renewal (6 Months = $21.40 1 Year = $32.10)

Type of Payment: _____ Check _____ MasterCard _____ Visa _____ Auto. billing

Credit Card Number: _____ Exp. Date: _____

Authorization Signature: _____

Return this application to: Computalk TCS, P.O. Box 18346, Fort Worth, Texas 76118.

Daisy Dot II by Roy Goldman

Reviewd by Dr. Warren Lieuallen-Reprinted from Fuji Facts, the A.C.E. of Columbus, OH, newsletter

Many of you are already familiar with the Daisy Dot Near Letter Quality emulation program. This public domain program has appeared on most user group's disks over the past six months and has received kudos from everyone who has seen it. In short, this program allows any Epson-compatible or Star printer to achieve 'near letter quality" in one of several different, user-definable fonts.

While most of the newer dot matrix printers come with a built-in NLQ font, this program frees you from its limitations of spacing and appearance. Daisy Dot fonts are proportionally spaced (the 'i's" are skinny, and the "M's" are wide), and the characters can take any form and shape you desire. A font editor was supplied with the program, along with five pre-defined fonts.

There are prices to pay for all this flexibility, of course. Daisy Dot requires ASCII files, already pre-formatted and ready to dump to the printer (most word processors are able to provide these ASCII files easily). Because Daisy Dot actually prints the file as graphic data, the printing process is rather slow (although fairly comparable with most printer's NLQ modes.) These are minor limitations, however, and are more than offset by the advantages allowed by this profesional quality program.

Nice though it is, there have been suggestions for improvements and modifications. One user went so far as to write his own program, Dot Magic, incorporating a few additioal features. For the ultimate in ease of use and flexibility, though, the definitive Daisy Dot II program is now the obvious choice.

Roy goldman has really outdone himself this time. While Daisy Dot was good, Daisy Dot II is truly fantastic. I honestly cannot give this program and the programmmer enough praise! It has been totally re-written in C (the original was in compiled Turbo BASIC), the user interface has been upgraded, and many new commands have been added. Roy Goldman remains available on Compuserve and GEnie, and has always been very helpful.

Ohe of Daisy Dot II's most unusual features is its documentation. Included on the disk is a set of files which contain all the documentation in a format ready for Daisy II to print. This 24 page manual is one of the best I have ever seen, for any product. It includes an introduction to the Daisy Dot II system, consisting of the main printing program, the new font editor, a font utilities package, and a graphic support program, examples of the 14 fonts provided, instructions on preparing the ASCII file with most popular word processors, and clear and concise examples of all of Daisy Dot II's commands.

These examples include both the precise syntax to include in your file, as well as a print-out of the resulting output. After a unique "question and answer" section, the manual concludes with a one page "Quick Reference Guide."

As an example of the flexibility of Daisy Dot II, in my own set-up, I have accumulated 21 different font, and have designed several myself. I use TextPro as the word processor, running from the SpartaDOS 192K RAMdisk. In this way, I may switch back and forth between Daisy Dot II and TextPro very quickly, and with no disk switching. This system is not quite convenient, it is also completely public domain!

The commands supported by by Daisy Dot II include:

1. The ability to change fonts "on the fly."

2. Left or right margin alignment, and right justification.

3. Automatic line centering, in any font.

4. Double width printing, in any font.

5. Underling of any font.

6. Proportional tabs.

7. User selected graphics densities, and character spacings.

8. Ability to include graphics in a text file.

9. Chain multiple files together, to allow unlimited text size.

10. AND MORE!

All of these commands are accessed from within the text file itself by preceding them with a backslash character ("\"). The syntax is sensible (most commands are abbreviated by their first letter) and easily mastered. A number of the commands can be combined, providing even more flexibility.

I have had the Daisy Dot II system for more than a month now, and have still not used it to its fullest potential. The flexibility and usefulness of this program rivals any commerical software available and only the user's imagination limits its uses. I strongly urge you to contact your local users' group to obtain a copy, and to support Mr. Goldman with a small donation for his work. You won't regret it.

Modification to the ST power-on reset delay timer
Jeff Rigby - Intersect Software
06/24/88

The following modification will cause the ST to be in a Halt condition for apx 14 sec following turn-on. This allows a Hard Drive time to go through its initialization. The modification will not affect reset timing (.3 sec). It's relatively simple in that it requires the replacement of only one resistor (in the 520 & 1040 series).

If you have a Hard Drive for your ST you presently have to turn on the HD, wait until it stops making noise (initialization...about 14 sec) and then turn on your computer. With the circuit modification below you can now turn both on at the same time (idiot proof).

520ST and 1040ST

All computers have reset circuts and a circuit to perform a reset after the computer has been turned on (allowing the power supply to stabilize). In the ST these two reset circuits are in one chip, a 556 timer IC (a 556 is two 555 timers in one package). Both circuits use the same timing components for a delay of .3 seconds. One circuit holds the reset low for .3 sec after the reset button has been pushed and the other holds the reset low for .3 seconds after power turn-on. This second circuit (power on reset) is the one we are going to change.

Basically we are looking at a 22Uf cap charging from B+ through a resistor (12k). When the voltage on the cap reaches trigger level the 555 timer turns off allowing the reset line to go high.

The formula for Time T with Cap C and Resistor R is as follows:

```
        Resistor = R
        Cap      = C   T= (1.1)*R*C
Time (hold down) = T
```

For a stock ST

R = 12k
C = 22Uf

Thus: T=(1.1)*(12000)*(0.000022)
T=.29 sec

Ok now for your computer....

Turn on your Hard drive and count the seconds until the activity light goes out. Mine is about 14 seconds. This time is what you need to determine the value of the resistor you are going to add to your ST.

For a time of 14 sec we use the following formula to determine the resistor we need.

R= (14 sec)/(1.1)*(0.000022)
R= 578k

Look in your ST for a Chip that has the number 556 on it (NEAR THE RESET BUTTON). Off pin 8 you will find a resistor with the color bands; brown, red, orange (12k).

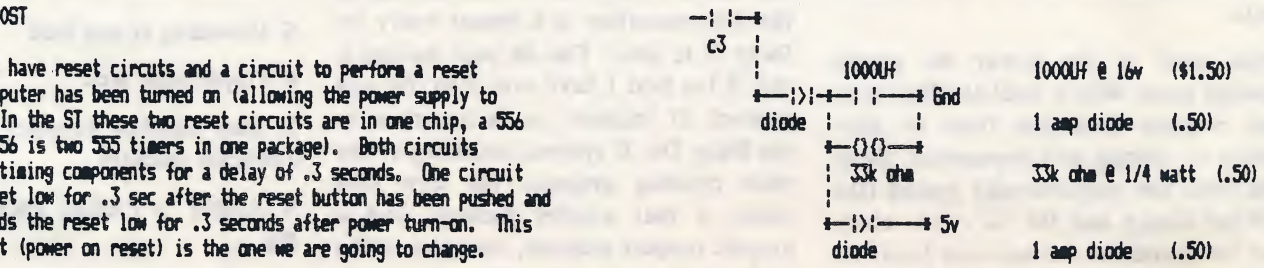
520ST R83
1040ST R9

Cut this resistor loose and install a 560K resistor; green, blue, yellow.

Now reassemble and check. Extremes of temperature can affect the timing of this RC circuit. I have found that a very cold computer (40F) can knock almost two seconds off the circuits reset time. Also, the 22Uf cap is manufactured with a tolerance of 20%. A 20% difference can make a 4 second difference in your calculations. You may want to install a variable resistor in place of a fixed resistor. If you are like me, you can't wait for your computer to come on and you will want the min wait time that still allows the HD to initialize properly. The variable resistor will allow you to set the time to the nearest second. Use a 360K resistor in series with a 500 K pot.

MEGA ST

Atari changed the design of the Reset circuit in the Mega ST. There are no longer two seperate circuits for reset. I had to kluge my Mega to get the same functionality. See below:



C3 is a 10Uf cap under the switching power supply. This cap is charged by a resistor network similar to the 555 circuit in the 520ST. When the voltage reaches 1.2v the reset line goes high. The circuit has the same .3 sec delay for reset and 13 seconds for turn-on.

The above circuit connects to the Mega at three places: 5v, Ground and the positive terminal of C3.

Increasing the value of the 1000Uf cap increases the turn-on reset delay. The 33K resistor is used to fine tune the reset delay for power turn-on. Increasing the value of the resistor decreases reset delay and decreasing the value increases power on reset delay. Typical resistor values are from 18k (19 sec) to 50k (11 sec).

The bottom diode discharges the 1000Uf cap to the 5v supply (when you turn off the computer the 5v supply goes to 0) when you turn the Mega off. You should count to 5 before turning a Mega back on to insure a complete cold boot. Waiting 1 sec will not allow the 1000Uf to discharge enough (the 5v supply in the Mega discharges slowly after dropping to .6v) and your power-on reset delay may drop to 9 sec from 13 sec.

The top diode provides isolation so that pressing the reset button after the 1000Uf cap has charged (power on) will cause only a .3 sec reset.

The above modifications require some technical skill and should be done by a service center or a qualified person. Intersect Software makes no guarantees reguarding the reliablity of the above modifications. You, as always, perform the modifications at your own risk.

Jeff Rigby
Intersect Software
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End of list.

HEWLETT-PACKARD DESKJET PRINTER

Reviewed by Mike Hall, STARBASE

I recently purchased a Hewlett-Packard DeskJet printer. This printer is a true 300 dots per inch (dpi) ink jet printer with built-in RS-232-C serial and Centronics parallel ports. It works like a laser printer in that it prints on sheet paper (8 1/2" by 11" or 8 1/2" by 14"), and also on manually positioned envelopes. The DeskJet command language (PCL Level 3) is compatible with the HP LaserJet series of laser printers, so printer drivers for LaserJet also work for the DeskJet. In fact, the DeskJet is positioned as a low cost laser quality printer for relatively low volume applications as compared to faster more expensive laser printers (e.g., the HP LaserJet II or Atari Laser printers).

The first thing you notice about the DeskJet is the arrangement of its paper trays. The input paper tray is on the front of the printer just below the output tray. This makes the printer very convenient to use and, in fact, gives it a smaller footprint than my old printer. The convenient paper feed system allows you to print on both sides easily by manually refeeding the output paper back into the input tray.

The DeskJet has two printing modes. In letter quality mode (300 dpi), text is printed at 120 characters per second and in draft mode (150 dpi), text is printed at 240 characters per second. Actually, the dots are the same size in draft mode, but only every other dot is printed. If you visually compare draft to letter quality mode, the only noticable difference is that draft mode appears lighter. You cannot see the missing dots unless you put your face within 2" of the paper.

The DeskJet printer uses an integrated print head / ink cartridge instead of a ribbon (or toner cartridge). The old ink jet printers had problems with the ink jets clogging up, but I have not seen this problem at all in the DeskJet. I counted 52 electrical contacts on the print head when I installed the ink cartridge, but even with all those contacts, the cartridge worked correctly the first time. The print cartridge is rated at 1.2 million draft characters or 0.5 million Letter Quality characters. Assuming ~40 characters/line and 65 lines/page, this is equivalent to ~460 draft pages or ~200 LQ pages.

Since the DeskJet spits ink at the paper instead of striking pins at the paper, it is much quieter than any dot matrix printer I have heard. The most noise that it makes is when ejecting the paper after printing. It has a mechanism that keeps the paper which is moving into the output tray from smearing the ink on the previously outputted page. The paper comes out the top front of the printer and then is dropped mechanically straight down on top of the previous page.

The printer has the ability to accept up to two font or emulation cartridges at one time. There are currently at least 10 font cartridges available, including: Helvetica, TmsRmn (Times Roman?), and Letter Gothic. An emulation cartridge supplants the native DeskJet command language (PCL). Only one emulation cartridge is available at this time, it is an Epson emulation cartridge.

The Epson cartridge makes the DeskJet compatible with an Epson FX-80 printer. The Epson emulation includes full graphic emulation and the ability to define/use a downloaded character set. This feature is used by ACALC PRIME to print spreadsheets sideways. The downloaded character set works, but it is very slow. In addition, the resolution of the downloaded characters is the same as an Epson and it looks very coarse compared to the DeskJet fonts. If you truly need landscape printing (sideways), HP has announced cartridges with landscape fonts and print functionality. The Epson cartridge has functioned properly with every program I tried that does not include a LaserJet or DeskJet driver (e.g. PrintMaster Plus).

I have been using the DeskJet primarily with Publishing Partner. The LaserJet fine (300 dpi), draft (150 dpi), and the Epson drivers all work correctly. I printed a sample page with all three drivers to compare the resolution. The LaserJet fine driver printed flawlessly with all the characters rounded (Columbia looks great). It even prints readable characters as small as 6 point. The LaserJet draft and the Epson drivers print at about the same reduced resolution (ok for drafts).

The DeskJet owner's manual says that the appearance of the printed output is influenced greatly by the type of paper used. Bond paper or xerographic paper works best. I bought a ream of the cheap Xerox paper and it worked just fine. I did notice that the ink on the printed output will run if exposed to water, unlike true laser output.

There are two things about the printer that I do not like. First, when the Epson cartridge is plugged in, it completely replaces the DeskJet command language. The only way to get the DeskJet commands back is to turn the printer off and unplug the Epson cartridge. Second, the configuration switches are under the front of the printer and difficult to change. This makes it difficult to change paper sizes. I suppose every printer has its foibles.

Now, you are wondering, how much does this printer cost? The list price is $995, but it can be found discounted several hundred dollars from that price. The Epson emulation cartridge list at $75 and the font cartridges range from $75 to $125. Extra ink cartridges are $18.95.

The Hewlett-Packard DeskJet printer offers the ST user true laser quality output for a low price on a printer with a small footprint and quiet operation.

****

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The **AUGUST** 8-Bit meeting will be held on **AUGUST 11th** at the Rec Center, 10540 Caminito Baywood, in Mira Mesa at 7:00 p.m. The ST **beginners/hands-on workshop** will be held at North Park Rec Center (Across from Folsom's Racquetball Court) **AUGUST 4th** at 6:30 p.m. The **regular ST meeting** occurs on **AUGUST 15th** at the North ParkRec Ctr..Social Room facility, at 6:30 p.m.